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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/705,233	11/12/2003	Tomohiro Wakabayashi	Q78419	3543
23373	7590	01/21/2005	EXAMINER	
SUGHRUE MION, PLLC 2100 PENNSYLVANIA AVENUE, N.W. SUITE 800 WASHINGTON, DC 20037			LE, THANH TAM T	
			ART UNIT	PAPER NUMBER
			2839	

DATE MAILED: 01/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/705,233

Applicant(s)

WAKABAYASHI ET AL.

Examiner

Thanh-Tam T. Le

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 09 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-10 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation "a positioning member, monolithically formed with the main body" in claim 1, line 4 were not described in the specification.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-5, 7 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by Borsuk et al. (4,666,238).

Art Unit: 2839

Regarding claims 1 and 9, Borsuk et al., figures 1 - 5, disclose a coupler (86) formed with a hollow portion, a ferrule (10) attached to a terminal of an optical fiber (34), the ferrule comprising:

- a main body (16) formed with a hole (18) into which a core wire (36) of the optical is inserted;
- a positioning member monolithically formed with the main body to place the optical fiber in such a position that a clearance is formed with between a deepest portion of the hole and a leading end of the core wire; and
- a leading end portion (12, optical lens) monolithically formed with the main body to serve as a convex lens such that light emitted from the core wire of the optical fiber is made to be parallel light, while incident light is focused onto the core wire.

Regarding claims 2 and 10, Borsuk et al., figures 1-5, disclose a coupler (86) formed with a hollow portion, a ferrule (10) attached to a terminal of an optical fiber (34), the ferrule comprising:

- a main body (16) formed with a hole (18) into which a core wire (36) of the optical is inserted;
- a positioning member monolithically formed with the main body to place the optical fiber in such a position that a clearance is formed with between a deepest portion of the hole and a leading end of the core wire; and

Art Unit: 2839

- a convex lens (12, optical lens) integrated with a leading end of the main body such that light emitted from the core wire of the optical fiber is made to be parallel light, while incident light is focused onto the core wire.

Regarding claim 3, at least leading end portion comprises of optically transparent resin.

Regarding claim 4, the clearance is filled with filler such that the clearance serves as a light guide path.

Regarding claim 5, the filler comprises of adhesive (54) for fixing the optical fiber in the hole.

Regarding claim 7, the filler is comprising of an optically transparent gel.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Borsuk et al. (4,666,238).

Borsuk et al., column 6, lines 57-60, disclose the index matching adhesive which has a refraction index similar to both the glass and the plastic material and the claimed invention as described above except for the refractive index of the adhesive/gel is selected to be greater than a refractive index of a material forming the leading end

Art Unit: 2839

portion, having a refractive index difference corresponding to a numerical aperture of the core wire. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide Borsuk et al. to have the refractive index of the adhesive/gel is selected to be greater than a refractive index of a material forming the leading end portion, having a refractive index difference corresponding to a numerical aperture of the core wire, since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. *In re Boesch*, 617 F.2d 272, 205 USPQ 215 (CCPA 1980), in order to have more securing between the optical and the ferrule.

### ***Response to Arguments***

7. Applicant's arguments filed 11/09/04 have been fully considered but they are not persuasive.

Regarding claims 1-2, and 9-10, Applicant argues the prior art does not teach or suggest "the convex lens, the main body and the positioning member be monolithically formed as a single unitary structure".

The Examiner disagrees. Borsuk et al., figures 1 and 2, disclose a convex lens (12), a main body (16) and a positioning member formed as a single unitary.

Regarding claims 6 and 8, the Examiner agrees that Borsuk et al. teach away from the invention since it discloses that the adhesive has the same refractive index as the lens. Therefore, the case law has been applied to modify with the Borsuk et al.'s reference.

***Conclusion***

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

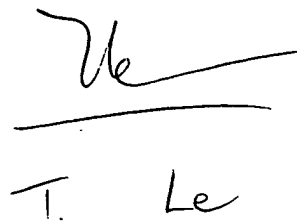
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thanh-Tam T. Le whose telephone number is 571-272-2094. The examiner can normally be reached on 7:30-5:00.

10. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, TC Patel can be reached on 571-272-2098. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2839

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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01/10/05.

  
T. Le